Scandinavian Journal of Immunology

The official journal of the Scandinavian Society for Immunology

Volume 12
Numbers 1–6/1980

Blackwell Scientific Publications

MANAGING EDITORS
M. Harboe and J. B. Natvig, Oslo, Norway

EDITORIAL ADDRESS
Scandinavian Journal of Immunology
Institute of Immunology and Rheumatology
Fr. Qvamsgt. 1, Oslo 1, Norway

ASSISTANT EDITORS

A. Svejgaard
Copenhagen, Denmark

O. Mäkelä
Helsinki, Finland

H. Wigzell
Uppsala, Sweden

N. H. Axelsen
Copenhagen, Denmark

E. Ruoslahti
Duarte, California, USA

P. Perlmann
Stockholm, Sweden

EDITORIAL BOARD

G. L. Ada, Canberra
F. H. Bach, Madison
J. F. Bach, Paris
G. Bendixen, Copenhagen
H. Bennich, Uppsala
P. Brandtzaeg, Oslo
B. D. Brondz, Moscow
J. C. Cerottini, Lausanne
C. G. Cochrane, La Jolla
C. P. Engelfriet, Amsterdam
V. Faber, Copenhagen
A. Fagraeus, Stockholm
H. H. Fudenberg, Charleston
D. Givol, Rehovot
M. F. Greaves, London
H. M. Grey, Denver
R. Grubb, Lund
P. Häyry, Helsinki
K. Hannestad, Tromsø
L. A. Hanson, Gothenburg
N. Hilschmann, Göttingen
G. Holm, Stockholm
N. K. Jerne, Basel
S. G. O. Johansson, Uppsala
G. Klein, Stockholm
H. G. Kunkel, New York
P. J. Lachmann, London
O. J. Mellbye, Oslo
J. F. A. P. Miller, Melbourne
E. Möller, Stockholm
H. Müller-Eberhard, La Jolla
O. Ouchterlony, Gothenburg
W. E. Paul, Bethesda
B. Pernis, New York
R. Porter, Oxford
M. Raff, London
I. Roitt, London
B. Rubin, Marseilles
M. Seligmann, Paris
M. Simonsen, Copenhagen
J. Sterzl, Prague
S.-E. Svehag, Odense
E. Thorsby, Oslo
G. Torrigiani, Geneva
M. W. Turner, London
O. Tønder, Bergen
R. van Furth, Leiden
O. Wager, Helsinki
R. C. Williams, Jr, Albuquerque

Contents

Volume 12, No. 1, July 1980

A Two-Signal Mechanism for the Induction of Cytotoxic T Lymphocytes. *F. W. Symington & H.-S. Teh* 1

Mitogenic Responsiveness of Human T-Lymphocyte Subpopulations: Regulation by Suppressive Fc-Receptor-bearing T Cells and Influence of Fractionation Procedures. *M.-L. Dillner-Centerlind. U. Hellström, E.-S. Robertsson, S. Hammarström & P. Perlmann* 13

Interaction of Human Polyclonal IgE and IgG from Different Species with Protein A from *Staphylococcus aureus*: Demonstration of Protein-A-reactive Sites Located in the Fab'$_2$ Fragment of Human IgG. *M. Inganäs, S. G. O. Johansson & H. H. Bennich* 23

Effects of Methylprednisolone on the in Vitro Induction and Function of Suppressor Cells in Man. *T. Hirschberg, B. Randazzo & H. Hirschberg* 33

Kinetics of the Different Susceptibilities of the Four Human Immunoglobulin G Subclasses to Proteolysis by Human Lysosomal Elastase. *A. Baici, M. Knöpfel, K. Fehr, F. Skvaril & A. Böni* 41

Study of the Mechanism for in Vitro Activation of Mouse NK Cells by Interferon. *A. Senik, J. P. Kolb, A. Örn & M. Gidlund* 51

Lymphocyte Transformation in Nickel Allergy: Amplification of T-lymphocyte Responses to Nickel Sulphate by Macrophages in Vitro. *S. Silvennoinen-Kassinen* 61

Complement (C3) Conversion by Rat Intestinal Glycoprotein and its Degradation Products. *R. Winsnes* 67

SHORT PAPER. HLA-DR-like Antigens in the Epithelium of the Human Small Intestine. *H. Scott, B. G. Solheim, P. Brandtzaeg & E. Thorsby* 77

Volume 12, No. 2, August 1980

EDITORIAL. T-Cell Receptor Idiotypes. *C. Janeway, B. Jones, H. Binz, H. Frischknecht & H. Wigzell* 83

Detection of Squamous Epithelial Intercellular Substance Antigen(s) in Hassall's Corpuscles of Human and Animal Thymus. *L. V. Beletskaya & E. V. Gnesditskaya* 93

Characterization of Active T Cells in CSF and Blood in Multiple Sclerosis Patients and Controls. *S. Kam-Hansen* 99

Concanavalin A-mediated in Vitro Activation of a Secondary Cytotoxic T-Cell Response in Virus-primed Splenocytes. *A. Randrup Thomsen & B. Løkke Jensen* 109

Some Functional Properties of the RNP Nucleoplasmic Antigen. *J. Jonsson & R. Norberg* 119

Production of DTH in the Mouse to Influenza Virus: Comparison with Conditions for Stimulation of Cytotoxic T Cells. *K. N. Leung & G. L. Ada* 129

Inhibition of Blastogenic Factor by Alloantigen-activated Human Lymphocytes. *P. F. Pfeffer & H. Hirschberg* 141

TCGF Production for Cloning and Growth of Functional Human T Lymphocytes. *H. Inouye, J. A. Hank, B. J. Alter & F. H. Bach* 149

A Gene of the Immunoglobulin H-Chain Cluster Controls the Murine Antibody Response to Pneumococcal Polysaccharide Type 14. *O. Mäkelä, V. J. Pasanen, H. Sarvas & M. Lehtonen* 155

SHORT PAPER. Priming against Stimulator-derived Alloantigens Bound onto MLC-activated Blasts. *B. Gänsbacher, K. Zier & E. D. Albert* 159

SHORT PAPER. Activation of Human Peripheral Blood Lymphocytes: Effect of Concanavalin A and Lipopolysaccharide on in Vitro Synthesis of DNA and Immunoglobulins. *L. Nespoli, A. Vitiello, R. Maccario, A. Lanzavecchia & A. G. Ugazio* 165

SHORT PAPER. A Synthetic Hexadecapeptide Derived from Allergen M Imposing Allergenic and Antigenic Reactivity. *S. Elsayed, K. Titlestad, J. Apold & K. Aas* 171

Announcement 176

Volume 12, No. 3, September 1980

EDITORIAL. Role of Polyclonal Activation in Specific Immune Responses. Relevance for Findings of Antibody Activity in Various Diseases. *E. Möller, H. Ström & S. Al-Balaghi* 177

Effector Cell Potential of Two Human T-Cell Subpopulations with Different Affinities to Sheep Erythrocytes. *P. Hokland & I. Heron* 183

Serological and Physicochemical Reactivity of Bovine Erythrocytes before and after Trypsin Treatment. *L. Edebo, R. R. A. Coombs & R. M. Binns* 193

Extensive Cross-reactive Idiotypy among Guinea-Pig Anti-TMA Antibodies. *K. E. Shafer & C. J. Bellone* 203

T-Cell Functions in Nude Mice: Proliferation of Spleen Cells from Athymic Mice in the One-way Xenogeneic Mixed Leucocyte Reaction. *L. Hammarström & C. I. E. Smith* 213

The Induction of Suppressor T Cells by Concanavalin A is Independent of Cellular Proliferation and Protein Synthesis. *F. L. Shand, I. M. Orme & J. Ivanyi* 223

Change in the Humoral Response of Athymic Nude Mice with Ageing. *P.-F. Piguet* 233

Immunological Effects of D-Penicillamine during Experimentally Induced Inflammation in Rats. *L. Binderup, E. Bramm & E. Arrigoni-Martelli* 239

The Antigens of *Mycobacterium bovis*, Strain BCG, Studied by Crossed Immunoelectrophoresis: a Reference System. *O. Closs, M. Harboe, N. H. Axelsen, K. Bunch-Christensen & M. Magnusson* 249

SHORT PAPER. Method to Prove Ingestion of Particles by Macrophages with Light Microscopy. *R. van Furth & M. M. C. Diesselhoff-den Dulk* 265

Volume 12, No. 4, October 1980

EDITORIAL. An Examination of MHC Restriction in the Context of a Minimal Clonal Abortion Model for Self Tolerance. *P. C. Doherty & J. R. Bennink* 271

Structural Studies of Three IgG κ Proteins from a Patient with Multiple Myeloma. *E. Dworsky, K. Sletten, M. Harboe & P. Wetteland* 281

Ovalbumin Immunity in the Rat: Simultaneous Testing of IgM, IgG and IgE Response Measured by ELISA and Delayed-type Hypersensitivity. *J. G. Vos, J. Boerkamp, J. Buys & P. A. Steerenberg* 289

Cross-reacting Xenoantibodies to the Heavy Chain of H-2 and HLA-A,B Antigens: Serologic and Immunochemical Characterization. *G. N. Callahan, M. A. Pellegrino & S. Ferrone* 297

Non-H-2 T-Lymphocyte-mediated Cytotoxicity after Primary in Vivo Sensitization. *S. Macphail* 303

Proliferative and Cytolytic Reactivities of Human Lymphocytes Fractionated on Wheat Germ Agglutinin–Sepharose Columns before or after Alloactivation in Mixed Lymphocyte Culture. *T. Lehtinen, P. Perlmann, U. Hellström & S. Hammarström* 309

Role of Adherent Cells in Graft-versus-Host-induced Suppression of the Humoral Immune Response. *L. Villeneuve, P. Brousseau, J. Chaput & R. Elie* 321

Reactivity of Hybridoma Antibodies with Amniotic and Plasma Fibronectin. *P. Kuusela, B. E. Bång, M. Hurme & O. Mäkelä* 331

Separation and Functional Analysis of Subpopulations of T Cells in the Bone Marrow of the Mouse. *C. Röpke* 339

Immunoglobulin Quantitation and Enumeration of Immunoglobulin-producing cells: Comparison of Two Indexes of B-Cell Activation. *J. Munoz, J. Pryjma, H. H. Fudenberg & G. Virella* 345

SHORT PAPER. Production of Human IgM Anti-D in Tissue Culture by EB-Virus-transformed Lymphocytes. *A. W. Boylston, B. Gardner, R. L. Anderson & N. C. Hughes-Jones* 355

SHORT PAPER. Secretory Component in Immunoglobulin Deficiency: an Immunoelectron Microscopic Study of Intestinal Epithelium. *H. Nagura, P. K. Nakane & W. R. Brown* 359

Volume 12, No. 5, November 1980

Augmentation of Human K-Cell Activity with Interferon. *J. R. Ortaldo, S. Pestka, R. B. Slease, M. Rubinstein & R. B. Herberman* 365

Effect of Leucocyte Interferon on Natural Killer Cells in Healthy Volunteers. *A.-L. Kariniemi, T. Timonen & M. Kousa* 371

Monoclonal B Lymphocytes in Multiple Myeloma. *D. Pettersson, H. Mellstedt & G. Holm* 375

Lymphocyte Blast Transformation Responses in Measles Infection. *J. Ilonen, M. Lanning, E. Herva & A. Salmi* 383

Cells Mediating Delayed-Type Hypersensitivity in the Lungs of Mice Infected with an Influenza A virus. *K. N. Leung & G. L. Ada* 393

Production and Main Characteristics of a Fetal Calf Serum-specific Cell Line that Induces T and B Cell Differentiation. *B. Rubin, M. A. Cooley, C. Le Borgne de Kaouel, R. B. Taylor & P. Golstein* 401

The Architecture of Rat Lymph Nodes. II. Lymph Node Compartments. *S. Fossum* 411

The Architecture of Rat Lymph Nodes. III. The Lymph Nodes and Lymph-borne Cells of the Congenitally Athymic Nude Rat (rnu). *S. Fossum, M. E. Smith, E. B. Bell & W. L. Ford* 421

The Architecture of Rat Lymph Nodes. IV. Distribution of Ferritin and Colloidal Carbon in the Draining Lymph Nodes after Foot-pad Injection. *S. Fossum* 433

Dynamics of the Interaction between *Entamoeba histolytica* and Components of the Immune Response. II. On the Distinction of Surface-bound and Internalized Anti-amoeba Antibodies. *A. Aust-Kettis & K.-G. Sundqvist* 443

Different Macrophage Requirement in the Specific and Polyclonal Responses Induced by TNP-LPS and LPS. *C. Martinez-Alonso, R. R. Bernabe & F. Diaz-Espada* 453

Volume 12, No. 6, December 1980

EDITORIAL. Molecular Theology, Immunophilosophy, and Autoimmune Disease. II. Speculation on the Aetiology and Pathogenesis of Rheumatoid Arthritis. *H. H. Fudenberg* 459

Antigen-dependent Physical Interaction between Human Monocytes and T Lymphocytes. *L. W. Powell, P. Hart, M. H. Nielsen & O. Werdelin* 467

Spontaneous Release of Luecocyte Migration-Inhibitory Factor by Mononuclear Cells Eluted from Rheumatoid Synovial Tissue. *H. Chattopadhyay, C. Chattopadhyay, J. B. Natvig, O. J. Mellbye & J. Pahle* 475

Two T-Cell Populations Mediate Delayed-Type Hypersensitivity to Murine Influenza Virus Infection. *K. N. Leung & G. L. Ada* 481

SHORT PAPER. Differential Role of Zn^{2+} in Antigen- and Mitogen-induced Lymphokine Production. *K. Bendtzen* 489

SHORT PAPER. Effect of Cyclosporin A on the Generation of Cytotoxic T Lymphocytes in Mouse Mixed Lymphocyte Culture. *A. Nemlander & P. Häyry* 493

SHORT PAPER. Effect of CBA/N *xid* on Spontaneous Production of Antibodies to DNA in MRL/1 and NZB Backcross Mice. *J. S. Cowdery, Jr, J. D. Taurog & A. D. Steinberg* 499

SHORT PAPER. Senile Cardiac Amyloid is Related to Prealbumin. *K. Sletten, P. Westermark & J. B. Natvig* 503

SHORT PAPER. Suppressor Activity of T Cells Bearing Fc Receptors for IgG on Lymphoid Colony Formation. *G. W. Canonica, V. Pistoia, R. Ghio, M. C. Mingari & L. Moretta* 507

SHORT PAPER. T. Lymphocytes in Malignant, Non-lymphoid Human Tumours Detected by Esterase Technique. *J.-L. Svennevig* 513

SHORT PAPER. Immunochemical Characterization of a Human B Lymphocyte Differentiation Antigen (p65). *E. W. Ades, S. Ferrone & C. M. Balch* 519

SHORT PAPER. Family of Large Surface Proteins on Human Lymphocytes. *B. Koller, B. Dunlap, J. Hank, S. L. Wee & F. H. Bach* 525

Abstracts of Papers Presented at the Eleventh Annual Meeting of the Scandinavian Society for Immunology, Arhus, Denmark, 11–14 June 1980 531

Referees

The following scientists have served as referees for the *Scandinavian Journal of Immunology* in 1980. We hereby thank each and all of them for their valuable work.

Johan A. Aarli, Department of Neurology, Haukeland Hospital, Bergen, Norway.
Kjell Aas, Department of Pediatrics, Rikshospitalet, Oslo, Norway.
Gordon L. Ada, Microbiology Department, John Curtin School of Medical Research, Canberra, Australia.
Nils H. Axelsen, State Serum Institute, Copenhagen, Denmark.
Jean-François Bach, Clinique Nephrologique, Hôpital Necker, Paris, France.
Gunnar Bendixen, Laboratory of Clinical Immunology, Rigshospitalet, Copenhagen, Denmark.
Klaus Bendtzen, Medical Department B, Rigshospitalet, Copenhagen, Denmark.
Hans Bennich, Institute of Molecular Biology, Aarhus University, Aarhus, Denmark.
G. Bird, Department of Clinical Immunology and Section of Oncology and Haematology, Huddinge Hospital, Stockholm, Sweden.
Hans von Boehmer, Basel Institute for Immunology, Basel, Switzerland.
Lasse R. Braathen, Department of Dermatology, Rikshospitalet, Oslo, Norway.
Per Brandtzaeg, Institute of Pathology, Rikshospitalet, Oslo, Norway.
Boris D. Brondz, Laboratory of Tumour Immunochemistry and Diagnosis, Cancer Research Centre, Moscow, USSR.
Jean-Charles Cerottini, Ludwig Institute for Cancer Research, Lausanne, Switzerland.
Chandra Chattopadhyay, Hope Hospital, Manchester, England.